# Rec'd PCT/TE 18 JAN 2005

### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

### (19) World Intellectual Property Organization

International Bureau



## 

(43) International Publication Date 15 January 2004 (15.01.2004)

### **PCT**

### (10) International Publication Number WO 2004/006036 A3

(51) International Patent Classification7: H05B 3/00

G05D 23/19,

(21) International Application Number:

PCT/PL2003/000064

(22) International Filing Date:

2 July 2003 (02.07.2003)

(25) Filing Language:

(26) Publication Language:

English

(30) Priority Data: 354910

5 July 2002 (05.07.2002)

- (71) Applicant (for all designated States except US): SECO/WARWICK SP. Z O.O. [PL/PL]; ul. Sobieskiego 8, PL-66-200 Swiebodzin (PL).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): KORECKI, Maciei [PL/PL]; ul. Zaków 4D/9, PL-66-200 Swiebodzin (PL).

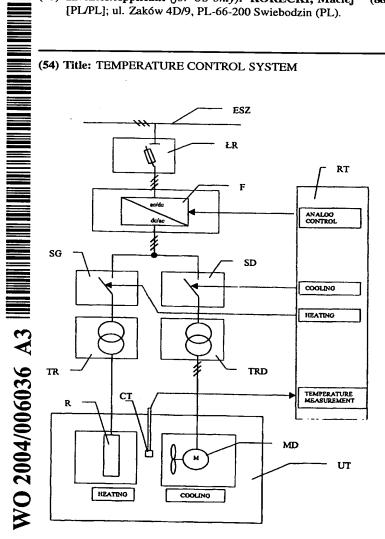
- (74) Agent: NISZTUK, Helena; Lubuski Klub Techniki i Racjonalizacji, ul. Niecala 2F, PL-65-245 Zielona Góra
- (81) Designated State (national): US.
- (84) Designated States (regional): European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

#### Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of
- (88) Date of publication of the international search report: 18 March 2004

[Continued on next page]

(54) Title: TEMPERATURE CONTROL SYSTEM



(57) Abstract: The purpose of the present invention is to create a temperature control system applied in heating and cooling phases of thermal processing. The invented temperature control system consists of a single frequency converter F to whose output, through contactors, are simultaneously connected: at least one heating system and at least one cooling system. The heating system incorporating resistance heating elements R is actuated by the heating system contactor SG. The cooling system incorporating gas blower, 3-phases induction motor MD is actuated by the blower motor contactor SD. The heating and cooling system contactors (SG and SD) are connected to the output of the frequency converter F and are controlled by the temperature controller RT.